

The Blue Marble Image of the Earth

By Don Hillger and Garry Toth

The Earth has been photographed from space for many years from numerous un-manned satellites as well as manned spacecraft. However, it is not often that a particular image of the Earth becomes extremely popular. Probably the most famous and single most widely-used full-disk true-colour image of the Earth is the so-called **Blue Marble** image. That photograph was taken on 7 December 1972 by the crew of Apollo-17 as they made their way to the moon. The sun was behind the observer and camera and so fully illuminated the Earth. December 2012 marked the 40th anniversary of the taking of that photograph!

Many other full-disk images of the Earth can be found, but they are not nearly as common as the Blue Marble image. Full-disk images are routinely available from numerous weather/environmental-observing satellites in geostationary orbit. While those images are taken from an altitude of 35,000 km, the Blue Marble photo was taken from farther away, at 45,000 km.

For reference, the original Blue Marble image is shown above. The postage stamps and other postal items of this article can be compared to it. The image is centred over the southern part of Africa. Except for brown and slightly-green land features, the tones are mostly blue, and thus the name given to this image. Identifying features in the image are the cloud-free Saharan Desert and Arabian Peninsula in the north. South of that, patchy clouds cover equatorial Africa, and still farther south a large frontal system of thick white clouds, visible as an inverted “comma”, creates a distinguishing feature that is immediately noticeable even on small renditions of the Blue Marble image. At the bottom of the image, Antarctica appears as mostly white, a combination of snow and ice surfaces and clouds, fully lit at what is nearly the peak of the Southern Hemisphere summer.

The Blue Marble image can be found on a large number of postal items. Aside from the beauty of the image, another reason for this is probably that the image is in the public domain. Some postal items reproduce it more or less faithfully while others, as will be seen, alter it in various ways. In some cases the colours have been changed or the image has been cropped from the original full-disk version.



The **Blue Marble** Image of the Earth taken on 7 December 1972

Or more importantly, in some reproductions the Blue Marble images have been rotated, or flipped, or both, when compared to the standard orientation with North on top. The rotated and flipped images can be harder to identify, though the big white comma cloud generally stands out. Its shape is useful to guide the transformations that flip and/or rotate an image on a stamp to the standard orientation.

More than 50 postal items that include the Blue Marble image have been found, though some are simply postal derivatives such as FDCs and other covers. In this article, only the postal items with the best Blue Marble images are shown. All known Blue Marble items including those with small or difficult-to-interpret images can be found in the authors' website as noted at the end of this article.

The following sections will cover the Blue Marble images as found on different types of postal items, starting with stamps and sheets, and later other postal items.

Blue Marble images on stamps and sheets

Clear Blue Marble images are found on many postage stamps, though some of them are rotated, flipped, or both. When that is the case, both versions are shown below. This facilitates easier comparison with the original Blue Marble image.

In 1998 Argentina issued a stamp (Scott 1989, Michel 2400) to publicize the protection of the Earth's ozone layer. It includes a vertically-flipped Blue Marble image.

Austria's orange and blue “Fire and Earth” stamp (Scott 2083, Michel 2635) from 2007 was issued for the Lower Austrian Provincial Exhibition. The fire and Earth elements characterize the life and resources of the region known as the Mostviertel – fire as necessary for working iron in the forge, Earth as the fertile soil for



France issued a stamp (Scott 3500c, Michel 4471) in 2008 with the Blue Marble image in standard orientation, along with eight of the Galileo-series global positioning system (GPS) satellites. The stamp was part of a sheet of four stamps, but only this stamp includes the Blue Marble image. Similarly, Guinea Republic issued an environmental-themed stamp (Michel 5117) in 2007, with the Blue Marble image in proper orientation behind an image of Leonardo DiCaprio, a prominent actor who has done some work related to the environment.



GUINÉE-BISSAU

Mercury 6

500

2007

JOHN GLENN



- Earth orientation.



500 anos do nascimento de Pedro Nunes

Portugal

0,28

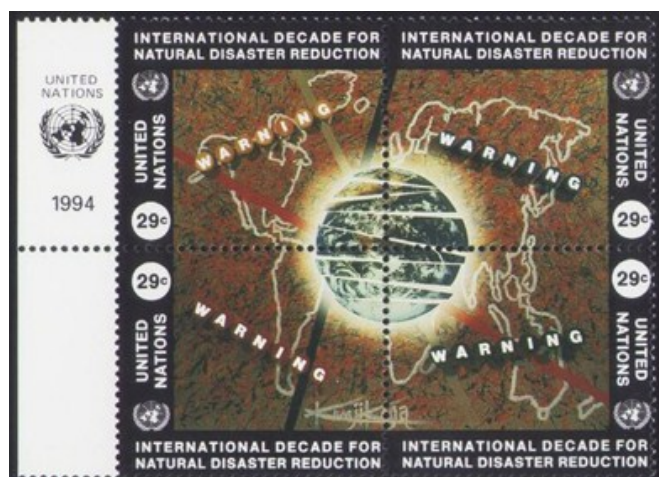
Portugal





This Turkish stamp (Scott 2785, Michel 3251) from 2001 shows Turksat-2A and its launch rocket in addition to a partial (but nearly-complete) Blue Marble image. The image is also shown rotated to the right and flipped vertically for standard Earth orientation.

The United Nations issued a set of blocks of four stamps from New York (Scott 650a, Michel 671-674), Geneva (Scott 254a, Michel 251-254), and Vienna (Scott 173a, Michel 170-173) in 1994. The blocks have similar designs. In each case the Blue Marble image is in the centre of the block, with one quarter on each of the four stamps. This set was issued to mark the International Decade for Natural Disaster Reduction (IDNDR). Only the New York block is shown here. The lines or cracks across the Blue Marble image symbolically represent the disaster theme.



A souvenir sheet of one stamp from South Africa (Scott 1468, Michel BL129) shown below right was issued with a partial Blue Marble image on the stamp and a second partial image in the right margin. In that latter image, the inverted white comma cloud near South Africa is not visible due to the shading and the other design elements that lie atop the bottom part of the image. The other clouds that can be clearly seen match those in the Blue Marble image. The sheet was issued for the 2011 International Astronomical Congress and also shows the South African amateur-built Sumbandila satellite in the upper margin of the sheet.

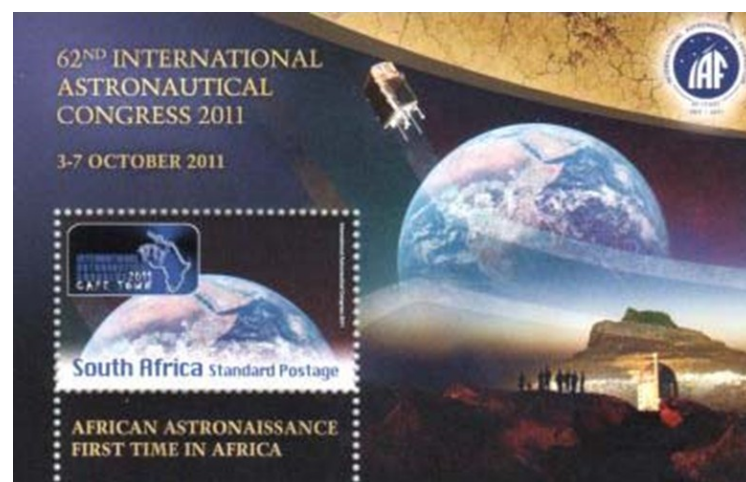
Djibouti has the Blue Marble image nearly centred on a block of four stamps from a sheet of nine stamps (e-f and h-i stamps in sheet, no catalogue numbers known) issued in 2010. In this case the Blue Marble image has more



emphasis on green tones than the original. The surrounding stamps feature four different un-manned satellites.

Blue Marble images on other postal items

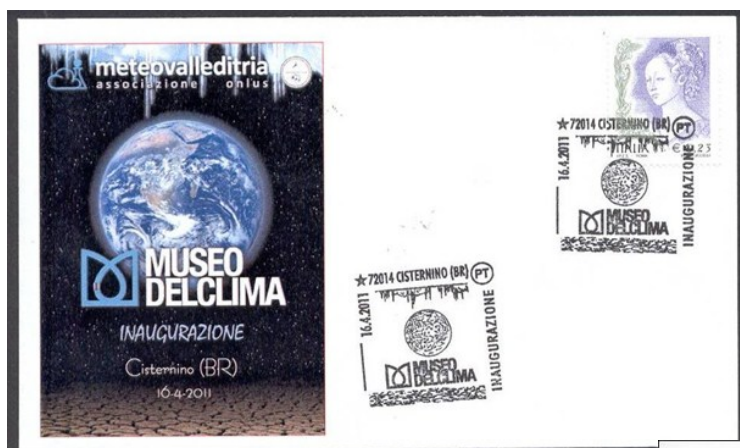
The Blue Marble image has also appeared on several other types of postal items. The first one shown is a postal card from Poland issued in 1996, with the Blue Marble image on the printed stamp. The card was issued for World Telecommunications Day.



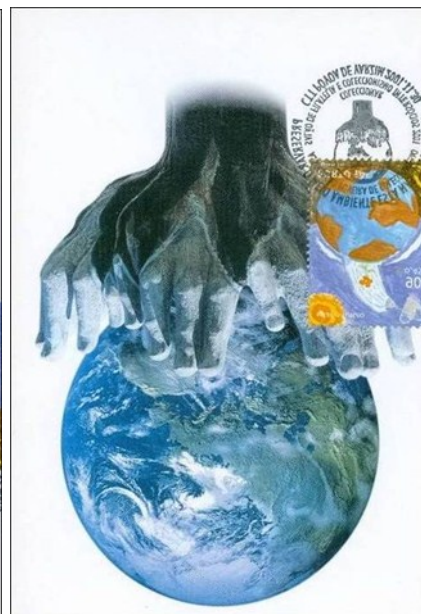
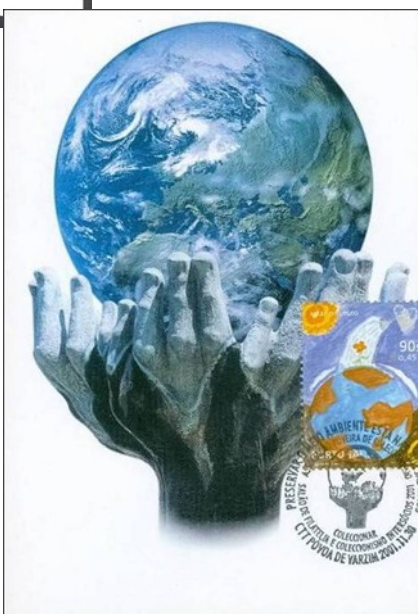


Another postal card from Poland, issued in 2003, has a partial Blue Marble image in the cachet. This card, like the previous one, was issued for World Telecommunication Day.

A postal cover from Italy dated 2011 has the Blue Marble image in the cachet. The cover is for the inauguration of the Climate Museum in Cisternino, Italy's first museum dedicated to climatology and meteorology. Note also that the special cancel attempts to show the Blue Marble image in a black and white drawing, with the outline of the comma cloud barely discernible.



A stamped card from Portugal (Scott 2415, Michel 2497) shown right dated 2001 has the Blue Marble image in the cachet, but it needs to be flipped vertically for the standard Earth orientation. In addition, the underlying geography has been changed: the clouds are clearly those of the Blue Marble image, but Europe has replaced Africa as the principal geographical reference in the centre of the image. The stamp was issued with the theme "preserving the environment is in our hands". The stamp shows a painted Earth and is one of three issued for winners of a children's stamp design contest. This stamped card is not a maxicard, since it was not canceled on the issue date of the stamp; rather, it was issued for a Philately and Collectors Association Fair.



The cachet on the above stamped envelope issued by Romania in 1998 shows the Blue Marble image both as a smaller image in the printed stamp and a larger image in the cachet. However, the reproduction in the cachet has an emphasis on much darker colours, so that the image is not easily recognized as the Blue Marble. The theme of the cover relates the "health of the planet" to the "security of life".

Finally, a booklet cover from Poland (Scott 3762, Michel 4162-4165) issued in 2001 has a nice reproduction of the Blue Marble image that is properly oriented with the booklet as shown. The four different stamps in the booklet have a History of the Earth theme.



Large astrophilatelic show to be held in Berlin next month

Cosmic Mail, moon-flown covers and two cosmonauts

Highly-prized exhibits with dozens of space-flown covers will be the focus of a high level astrophilatelic show entitled „Astrophil 2013“ in Berlin this Spring. Covers flown to space stations Salyut 6, Salyut 7, MIR and the International Space Station will be on display, as well as philatelic envelopes carried to the Moon by Apollo 11, 13, 14 and 15.

And that's not all! Two cosmonauts will give presentations during the show: Russian veteran Vladimir Kovalyonok and the first German cosmonaut Sigmund Jähn will also be signing autographs. „Astrophil 2013 – Joint German-Russian exhibition on space philately“ commemorates the 50th anniversary of the first spaceflight undertaken by a woman cosmonaut, and the 35th anniversary of the first flight of a German national into space. The show takes place from 12 to 14 April 2013 in the Russian House for Science and Culture in Berlin.

First astrophilatelic show in Germany for years

In addition to world-class standard exhibits owned the President of the FIP Section on Astrophilately, Igor Rodin from Moscow, and the equally exclusive „Cosmic Mail“ collection owned by Austrian Walter M. Hopferwieser, a total of 30 exhibits from Austria, the Czech Republic, Germany, Italy, Monaco, Romania and Russia will be on display. The exhibits will cover the whole range of collection types: astrophilatelic exhibits as well as thematic exhibits or Open Class collections. „We are proud to be able to come to Berlin and present such a wide range of specimens from our collections. This is the first ‘space-only’ stamp exhibition in Germany for ages“, says Florian Noller, President of the Working Group on Space Philately (Bundesarbeitsgemeinschaft Weltraum Philatelie e. V.)

The Federal Working Group on Space Philately (Bundesarbeitsgemeinschaft „Weltraum Philatelie“ e. V.) in the Federation of German Philatelists (BDPh) is hosting the exhibition jointly with the President of the FIP Section on Astrophilately, Igor Rodin from Moscow. The Federation of Berlin Stamp Clubs (Verband Berliner Philatelisten-Vereine), the Association of Russia/UdSSR Stamp Collectors Berlin (Verein der Briefmarkenfreunde Rußland/UdSSR Berlin) and the Russian House of Science and Culture are also partners in the ambitious endeavour, which takes place on the „Day of Cosmonautics“, the annual celebration of the very first manned space flight which took place in 1961.

Mobile Post Office carrying pictorial postmarks, commemorative covers and more

On 13 April, the German Postal Service will also be attending the show with a mobile Post Office. The Post Office will carry a pictorial postmark commemorating the 50th anniversary of the first spaceflight undertaken by a woman - Valentina Tereshkova - accompanied by an official printed cover and a personalised stamp. Postmark permit meter slogan cancellations commemorating cosmonauts Kovalyonok and Jähn as well as stamps issued by private postal companies will also be available from the club. The

Blue Marble : Additional online information

A checklist of postal items showing the Blue Marble image is available at <http://rammb.cira.colostate.edu/dev/hillger/satellite-images.htm>, with the Blue Marble items in a separate section from the rest of the satellite images. More than 50 items are listed from more than 20 countries. The authors would like to hear from anyone who knows of additional reproductions of the Blue Marble image on postal items. The authors continually update the online details as new information is received. E-mail correspondence with the authors is welcomed.

Biographical notes

The authors have researched and written extensively on the subjects of weather, climate, and un-manned satellites on stamps and covers. See <http://rammb.cira.colostate.edu/dev/hillger/stamp-articles.htm>

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two stamp clubs are organising a 'swap shop' for space collectors where they will be able to swap, buy and/or sell space stamps and covers, or just chat about their hobby.

Fascinating events to accompany the show

The swap shop will take place on Saturday morning. In the afternoon, cosmonauts Kovalyonok and Jähn will be sharing memories of their joint „Intercosmos“ space flight on Salyut 6, followed by round table talk about the future of manned space exploration. An autograph-signing session will conclude the afternoon.

Sunday is dedicated exclusively to astrophilately. The President of the FIP (International Philatelic Federation) Section on Astrophilately, Igor Rodin, will chair a seminar on how to put together an astrophilatelic collection. On this occasion, Rodin will share a video on space-flown mail produced onboard space station MIR. Walter M. Hopferwieser from Salzburg will then share his latest research on Cosmic Mail. Hopferwieser, a renowned official expert on Cosmic Mail, is soon to publish a new catalogue on the topic.

See Websites: <http://www.weltraumphilatelie.de> , <http://www.astrophilatelist>

Report by Jürgen P. Esders